

WHAT IS CLAIMED IS:

1. ~~A liquid crystal display element including a~~  
pair of transparent substrates, a liquid crystal  
sandwiched between said pair of transparent substrates,  
5 and liquid crystal alignment films formed on liquid  
crystal side surfaces of said respective transparent  
substrates, wherein:

said liquid crystal alignment films are aligned  
dividedly by a dot and/or by a pixel, and liquid crystal  
10 alignment directions at two dots or more and/or at two  
pixels or more differ from each other so that it is  
possible to obtain a predetermined main viewing angle  
direction.

15 2. A liquid crystal ~~display~~ element including a  
pair of transparent substrates, a liquid crystal  
sandwiched between said pair of transparent substrates,  
and liquid crystal alignment films formed on liquid  
crystal side surfaces of said respective transparent  
20 substrates, wherein:

said liquid crystal alignment films are aligned  
dividedly by a dot, and liquid crystal alignment  
directions at two dots or more differ from each other so  
that it is possible to obtain a predetermined main  
25 viewing angle direction.

3. The liquid crystal display element according to  
claim 2, wherein said liquid crystal alignment directions  
at four dots differ from each other.

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4. The liquid crystal display element according to

claim 2, wherein said liquid crystal alignment directions at dots adjoining to each other differ from each other.

5 5. A liquid crystal display element including a pair of transparent substrates, a liquid crystal sandwiched between said pair of transparent substrates, and liquid crystal alignment films formed on liquid crystal side surfaces of said respective transparent substrates, wherein:

10 said liquid crystal alignment films are aligned dividedly by a pixel, and liquid crystal alignment directions at two pixels or more differ from each other so that it is possible to obtain a predetermined main viewing angle direction.

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6. The liquid crystal display element according to claim 5, wherein said liquid crystal alignment directions at four pixels differ from each other.

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7. The liquid crystal display element according to claim 5, wherein said liquid crystal alignment directions at pixels adjoining to each other differ from each other.

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8. A method for manufacturing a liquid crystal display element including a pair of transparent substrates, a liquid crystal sandwiched between said pair of transparent substrates, and liquid crystal alignment films formed on liquid crystal side surfaces of said respective transparent substrates, said method comprising the steps of:

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forming ultraviolet light responsive type liquid

crystal alignment films on said pair of transparent  
substrates;

5 irradiating said liquid crystal alignment films on  
said transparent substrates parallel to a reference plane  
with a polarized ultraviolet ray dividedly by a dot so  
that liquid crystal alignment directions at two dots or  
more differ from each other for obtaining a predetermined  
main viewing angle direction so as to regulate an  
alignment direction of said liquid crystal; and

10 irradiating said transparent substrate, on which  
said liquid crystal alignment films irradiated with said  
polarized ultraviolet ray are formed, with said polarized  
ultraviolet ray dividedly by the dot for developing a  
pre-tilt angle after rotating said transparent substrate  
15 on said reference plane so that said transparent  
substrate turns to a direction different from its  
direction at the time of said irradiating said liquid  
crystal alignment films.

20 9. The method for manufacturing a liquid crystal  
display element according to claim 8, wherein said liquid  
crystal alignment directions at four dots differ from  
each other.

25 10. The method for manufacturing a liquid crystal  
display element according to claim 8, wherein said liquid  
crystal alignment directions at dots adjoining to each  
other differ from each other.

30 11. A method for manufacturing a liquid crystal  
display element including a pair of transparent

substrates, a liquid crystal sandwiched between said pair  
of transparent substrates, and liquid crystal alignment  
films formed on liquid crystal side surfaces of said  
respective transparent substrates, said method comprising  
5 the steps of:

forming ultraviolet light responsive type liquid  
crystal alignment films on said pair of transparent  
substrates;

10 irradiating said liquid crystal alignment films on  
said transparent substrates parallel to a reference plane  
with a polarized ultraviolet ray dividedly by a pixel so  
that liquid crystal alignment directions at two pixels or  
more differ from each other for obtaining a predetermined  
main viewing angle direction so as to regulate an  
15 alignment direction of said liquid crystal; and

irradiating said transparent substrate, on which  
said liquid crystal alignment films irradiated with said  
polarized ultraviolet ray are formed, with said polarized  
ultraviolet ray dividedly by the pixel for developing a  
20 pre-tilt angle after rotating said transparent substrate  
on said reference plane so that said transparent  
substrate turns to a direction different from its  
direction at the time of said irradiating said liquid  
crystal alignment films.

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12. The method for manufacturing a liquid crystal  
display element according to claim 11, wherein said  
liquid crystal alignment directions at four pixels differ  
from each other.

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13. The method for manufacturing a liquid crystal

~~display~~ element according to claim 11, wherein said liquid crystal alignment directions at pixels adjoining to each other differ from each other.

5           14. A method for manufacturing a liquid crystal display element including a pair of transparent substrates, a liquid crystal sandwiched between said pair of transparent substrates, and liquid crystal alignment films formed on liquid crystal side surfaces of said  
10   respective transparent substrates, said method comprising the steps of:

          forming ultraviolet light responsive type liquid crystal alignment films on said pair of transparent substrates;

15           irradiating said liquid crystal alignment films on said transparent substrates parallel to a reference plane with a polarized ultraviolet ray dividedly by a dot and/or by a pixel so that liquid crystal alignment  
20   directions at two dots or more and/or at two pixels or more differ from each other for obtaining a predetermined main viewing angle direction so as to regulate an alignment direction of said liquid crystal; and

          irradiating said transparent substrate, on which said liquid crystal alignment films irradiated with said  
25   polarized ultraviolet ray are formed, with said polarized ultraviolet ray dividedly by the pixel for developing a pre-tilt angle after rotating said transparent substrate so that said transparent substrate turns to a direction different from its direction at the time of said  
30   irradiating said liquid crystal alignment films.